

Page 1

Friday, September 22, 2017 8:51:33 AM

Item ID: D135-692-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: EC135 Bearpaw Wearplates

Stop *NS2*

Start Date: 9/22/2017 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 10/4/2017 **Req'd Qty:** 1.00 ***1***

Customer:

Reference: 132436 S/O

Approvals: Process Plan: WJ Date: 17/9/27 Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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DSI9400 Rev A

DSI9750 REV A

SEP 22 2017

100

Document Control

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile and create labels per PPP D135-692-041 CHG002

27
9-8

SEP 22 2017

110

Pick Kit

0.00

110

Packaging

Packaging

Memo

0.00

Packaging

SEP 22 2011

DAS
6
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Friday, September 22, 2017 8:51:33 AM

Page 2

NS1

Stop ***NS2***

Reference:

Stop *NR2*

**Insp.
Stamp**

120

Quality Control

DAS
27
9-89

SEP 22 2017

130

Packaging

Identify and pack for shipping as per PPP D135-692-041
CHG001Location: _____ PPP Rev: _____

DAS
27
9-89

SEP 22 2017

21
9-89

140

Quality Control

~~SEP 22 2017~~

SEP 22 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

Picklist Print

Friday, September 22, 2017 8:51:32 AM

Page 1

Work Order ID: 166443

166443

Parent Item: D135-692-041

D135-692-041

Parent Item Name: EC135 Bearpaw Wearplates

Start Date: 9/22/2017

Required Date: 10/4/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A new issue ECN1089 08-02-04 DD verified by:EC
IPP Rev:B ECN 1132 08-02-20 DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2529 *D2529* Washer		Manufactured	No			110	Each	375.0000	8	8		SEP 22 2017	DAS 28 9-89
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Location	Loc Qty	Loc Code
ST008	375	
160670	3	
164975	372	

D3719-041 *D3719-041* Wearplate Assembly		Manufactured	No			110	Each	0.0000	2	2		SEP 22 2017	DAS 28 9-89
---	--	--------------	----	--	--	-----	------	--------	---	---	--	-------------	-------------

AN4-11A *AN4-11A* BOLT		Purchased	No			110	Each	206.0000	4	4		SEP 22 2017	DAS 28 9-89
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Location	Loc Qty	Loc Code
FG	20	
120731	20	
ST344	186	
M138408	186	

AN4-13A *AN4-13A* Bolt		Purchased	No			110	Each	28.0000	8	8		SEP 22 2017	DAS 28 9-89
-------------------------------------	--	-----------	----	--	--	-----	------	---------	---	---	--	-------------	-------------

Location	Loc Qty	Loc Code
FG	20	
122808	20	
GA	8	
m135470	8	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

Picklist Print

Friday, September 22, 2017 8:51:32 AM

Work Order ID: 166443

166443

Parent Item: D135-692-041

D135-692-041

Parent Item Name: EC135 Bearpaw Wearplates

Start Date: 9/22/2017

Required Date: 10/4/2017

Start Qty: 1.00

Required Qty: 1.00

MS21042L4

Purchased

No

110

Each

1,654.000

12

12

MS21042L4

Nut

Location

Loc Qty

Loc Code

FP001

10

m133363

10

OVER007

500

m138230

500

ST303

1144

m138170

500

m138326

644

NAS1149D0463J

Purchased

No

110

Each

1,492.000

8

8

NAS1149D0463J

Washer

Location

Loc Qty

Loc Code

GA

445

M135056

40

M137699

405

Return2017

16

M136665

16

ST263

1031

M137988

600

M138230

431

SEP 22 2017

DAS
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DAS
28
9-89

DAS
27
9-89

SEP 22 2017

DAS
6
9-89

DAS
28
9-89

DAS
27
9-89

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D135-692 REV. A

REF. FAA STC: SR01042SE

The D135-692-041 Wearplate Kit can be installed on Dart D135-692-011 Bearpaw Installations. The D3719-041 Wearplates should be installed on the D3049-1 Bearpaws as shown in Figure 1 on sheet 2 of this service instruction. The bearpaw should otherwise be installed on the skidtube per installation instructions IIN-D135-692 Rev. A.

WEIGHT AND BALANCE

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D135-692-041	2.24 lb	0.0 in	0.0 in-lb	199.7 in	447 in-lb
Wearplate Kit	1.0 kg	0.0 m	0.0 m-kg	5.07 m	5.1 m-kg

PARTS LIST

QTY	Part Number	Description
X	D135-692-041	Wearplate Kit
2	D3719-041	Wearplate
8	AN4-15A	Bolt
8	AN960JD416	Washer
8	MS21042L4	Nut (or MS21042-4)

22/12/12 m
 66443 NO.
 WORK ORDER
 WITHOUT NOTICE
 SUBJECT TO AMENDMENT
 UNCONTROLLED COPY
 ENGINEERING
 RETURN TO
 SHOP COPY

A	NEW ISSUE	CP	07.12.12
REV.	DESCRIPTION	BY	DATE
DESIGN	92	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	92		
CHECKED	140	DRAWING NO.	REV. A
MFG. APPR.	EE	DSI 9400	SHEET 1 OF 2
APPROVED	140	TITLE	SCALE
DE APPR.	140	WEARPLATE KIT	NTS
DATE	07.12.12	COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

DQA: _____ Date: _____



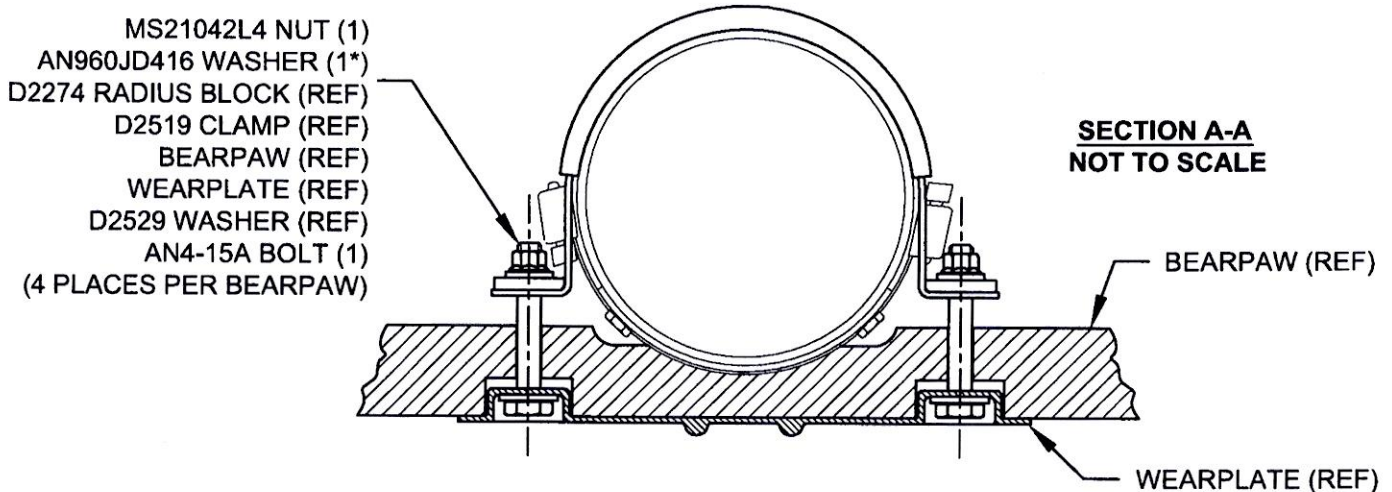
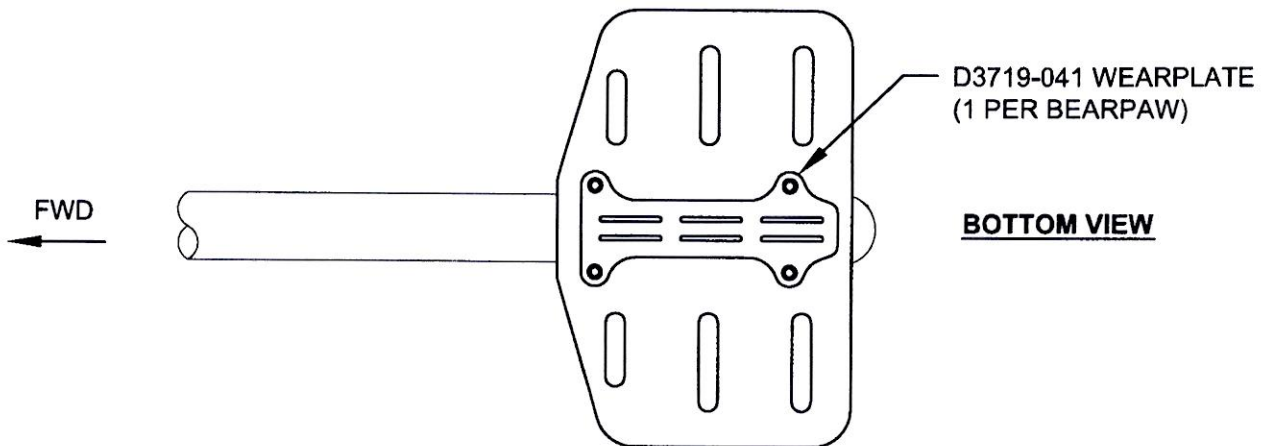
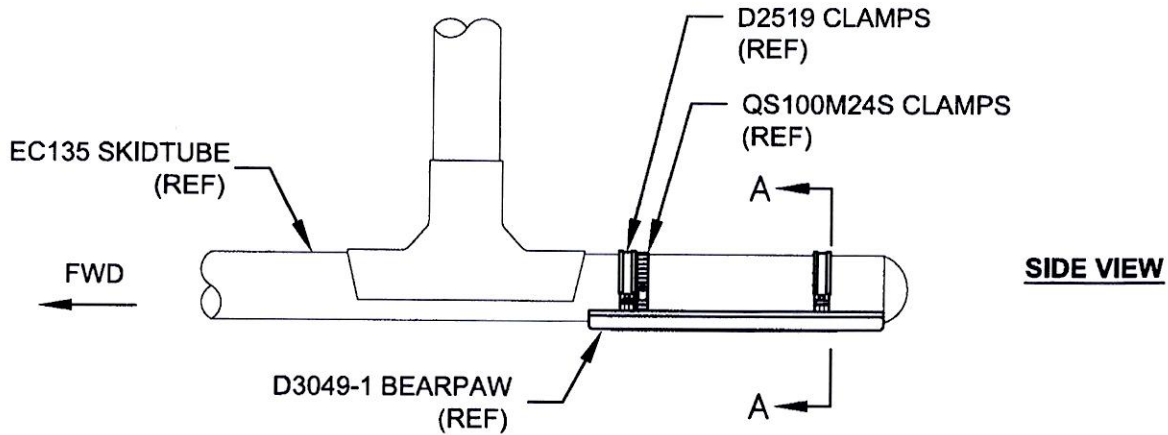
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
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Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

FIGURE 1: D135-692-041 WEARPLATE KIT



* ADDITIONAL AN960JD416 WASHERS MAY BE INSTALLED UNDER THE NUTS TO ENSURE 1.5-4 THREADS IN SAFETY ON THE BOLTS. IT IS ALSO ACCEPTABLE TO REPLACE THE AN4-15A BOLTS WITH LONGER OR SHORTER AN4 BOLTS, IF REQUIRED.

DESIGN	90	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	90		
CHECKED	140	DRAWING NO.	REV. A
MFG. APPR.	BE	DSI 9400	SHEET 2 OF 2
APPROVED	140	TITLE	SCALE
DE APPR.	140	WEARPLATE KIT	NTS
DATE	07.12.12	COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
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Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D135-692 REV. B AND
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D135-692 REV. 1
REF. FAA STC: SR01042SE
REF. TCCA LETTER OF ACCEPTANCE: 120S-GA-08-52
REF. EASA STC: 10038103

1.0 PURPOSE

The purpose of this Dart Service Instruction is to allow customers with D135-692-011 Bearpaws at CHG 002 and earlier to modify the D3049-1 Bearpaw to relocate the aft most D2519 Clamp and D2182B060 Rubber Cushion by up to 2.5" (63.5 mm) further forward to avoid interference with the snow ski provisions on the OEM skidtubes. At CHG 003 and later, the D3049-1 Bearpaw is supplied with the provisions to relocate the clamp and cushion.

2.0 INSTALLATION PROCEDURE

2.1 Jack up the aircraft. Ensure the skidtubes are serviceable.

NOTE: For D135-692-011 Bearpaw Kits at CHG 002 and prior, drill Qty 2x Ø0.26" (6.60 mm) holes through the D3049-1 Bearpaws as indicated in Figure 1 of this Dart Service Instruction. Counter bore the holes on the underside of the bearpaws Ø0.94" to Ø1.00" (23.87 mm to 25.40 mm) and to a depth of 0.40" (10.16 mm).

2.2 If installing the D135-692-011 Bearpaw Kit with the D135-692-041 Wearplate Kit, align the D3719-041 Wearplate under the D3049-1 Bearpaw as shown in Figure 1 of this service instruction and install the bearpaw and wearplate onto the skidtube using the hardware shown in Figure 2, 3 and 4 of this service instruction.

2.3 If installing the D135-692-011 Bearpaw Kit without the D135-692-041 Wearplate Kit, align the D3049-1 Bearpaw as shown in Figure 1 of this service instruction and install the bearpaw onto the skidtube using the hardware shown in Figure 5 of this service instruction.

NOTE: The bearpaws should be installed over the skidtube wearshoes. The D3049-1 Bearpaw may be relieved to clear skidtube wearshoe mounting screws provided the relief leaves 0.375" (9.53 mm) thickness.

CAUTION: The torque on the nuts should be limited to 20 in-lb (2.3 Nm).

2.6 Lower the aircraft.

2.7 Update the aircraft log book as applicable to indicate installation of the DSI 9750-011 Install Modification, D135-692-011 Bearpaws and D135-692-041 Wearplate Kit.

A	NEW ISSUE	ML	18.06.01
REV.	DESCRIPTION	BY	DATE
DESIGN	ML	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ML		
CHECKED	<i>u</i>	REV. A SHEET 1 OF 5	
MFG. APPR.	N/A		
APPROVED	<i>[Signature]</i>	SCALE NTS	
DE APPR.	<i>[Signature]</i>		
DATE	16.06.01	COPYRIGHT © 2018 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

The DSI 9750-011 Clamp Relocation Kit can be procured from Dart to install D135-692-041 on D135-692-011 at CHG 002 and earlier, and includes hardware for Qty 2x skid tubes.

Qty -011	Part Number	Description
X	DSI 9750-011	Clamp Relocation Kit
8	D2529	WASHER
4	AN4-11A	BOLT
4	MS21042L4	NUT

The parts list for IIN-D135-692 and ICA-D135-692 is amended as follows:

Qty -011	Qty -041	Part Number	Description
X		D135-692-011	BEARPAW INSTALLATION
	X	D135-692-041	WEARPLATE KIT
4		D2182B060	RUBBER CUSHION
8		D2274	RADIUS BLOCK
2		D3049-1	BEARPAW
8	8	D2529	WASHER
4		D2519	CLAMP
	2	D3719-041	WEARPLATE
	4	AN4-11A	BOLT
8	8	AN4-13A	BOLT
8	12	MS21042L4	NUT (OR MS21042-4)
8	8	NAS1149D0463J	WASHER
4		QS100M24S	CLAMP

4.0 WEIGHT AND BALANCE

There is a negligible weight and balance change associated with this modification.

DESIGN	ML	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ML		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9750	SHEET 2 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	INSTALL MODIFICATION	NTS
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DQA: _____ Date: _____

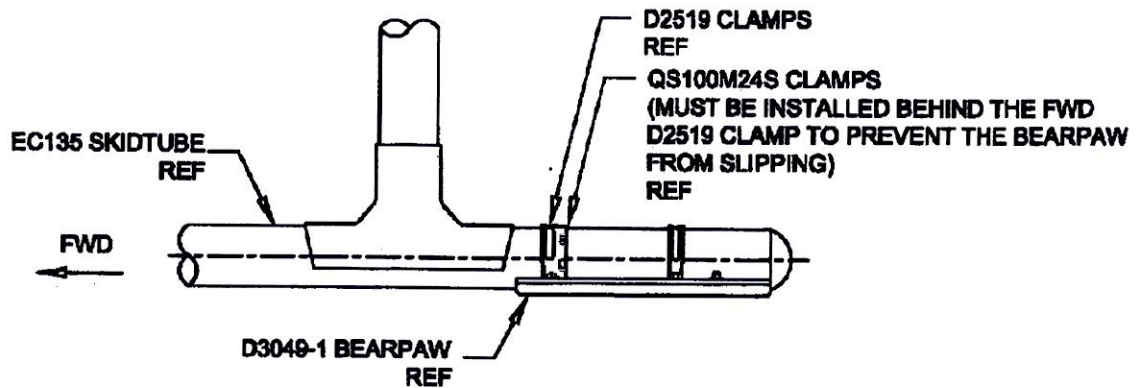


WORK ORDER NON-CONFORMANCE / UPDATE

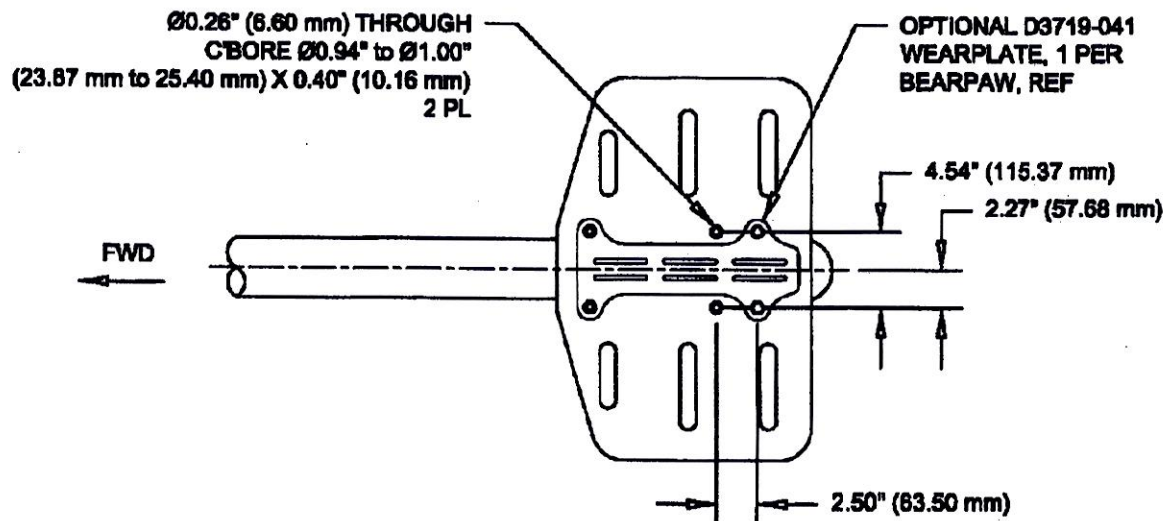
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					



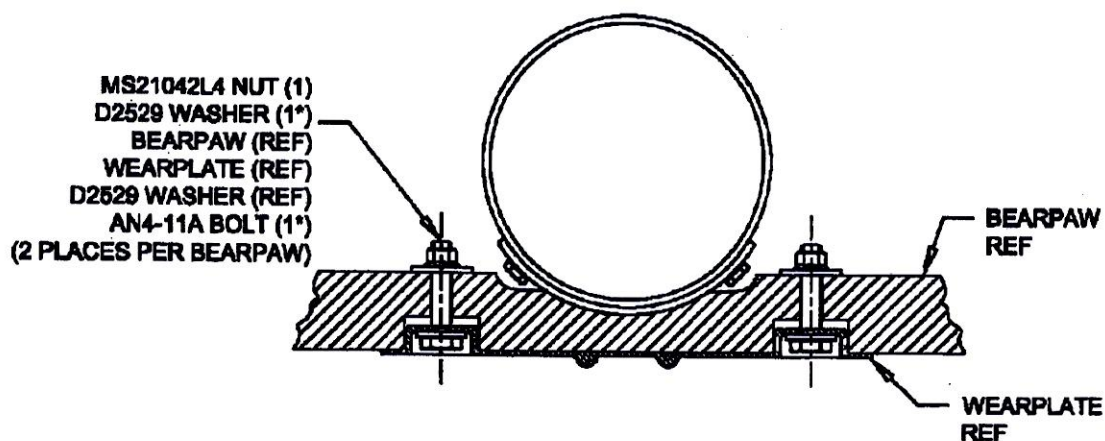
SIDE VIEW



BOTTOM VIEW

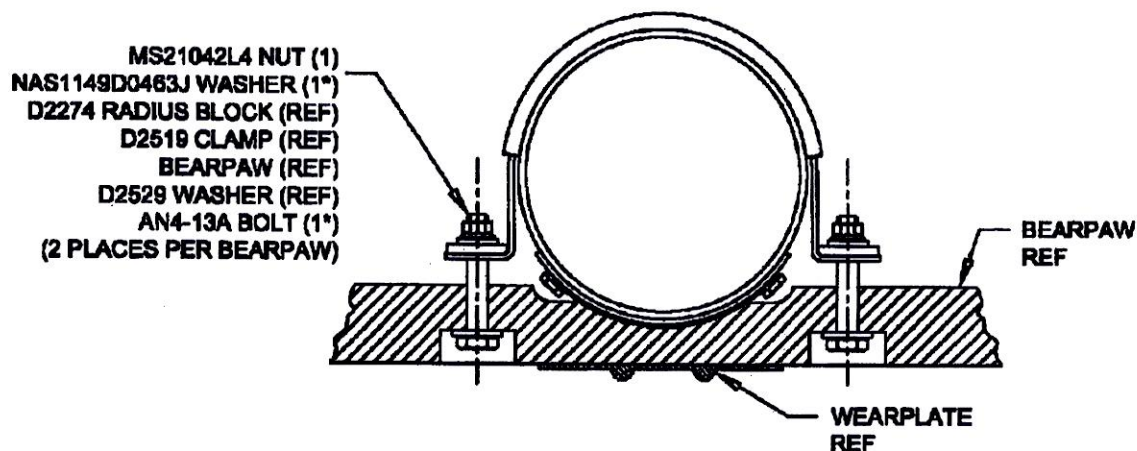
FIGURE 1: MODIFICATION OF D135-692-011 INSTALLATION
NOT TO SCALE

DESIGN	ML	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ML		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9750	SHEET 3 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
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* ADDITIONAL NAS1149D0463J WASHERS MAY BE INSTALLED UNDER THE NUTS TO ENSURE 1.5-4 THREADS IN SAFETY ON THE BOLTS. IT IS ALSO ACCEPTABLE TO REPLACE THE AN4-11A BOLTS WITH LONGER OR SHORTER AN4 BOLTS, IF REQUIRED.

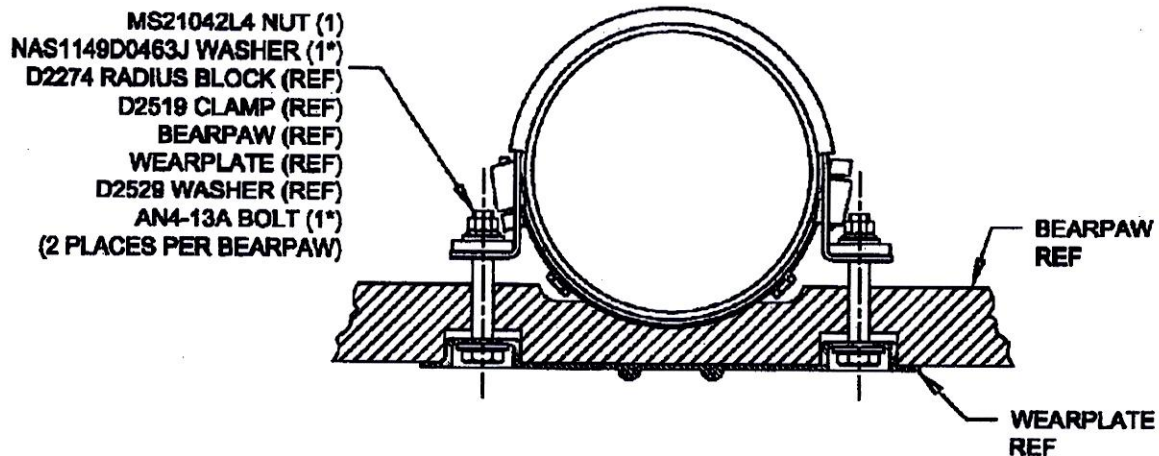
FIGURE 2: HARDWARE INSTALLATION AT AFT HOLE LOCATION
(WITH WEARPLATE, NOT TO SCALE)



* ADDITIONAL NAS1149D0463J WASHERS MAY BE INSTALLED UNDER THE NUTS TO ENSURE 1.5-4 THREADS IN SAFETY ON THE BOLTS. IT IS ALSO ACCEPTABLE TO REPLACE THE AN4-13A BOLTS WITH LONGER OR SHORTER AN4 BOLTS, IF REQUIRED.

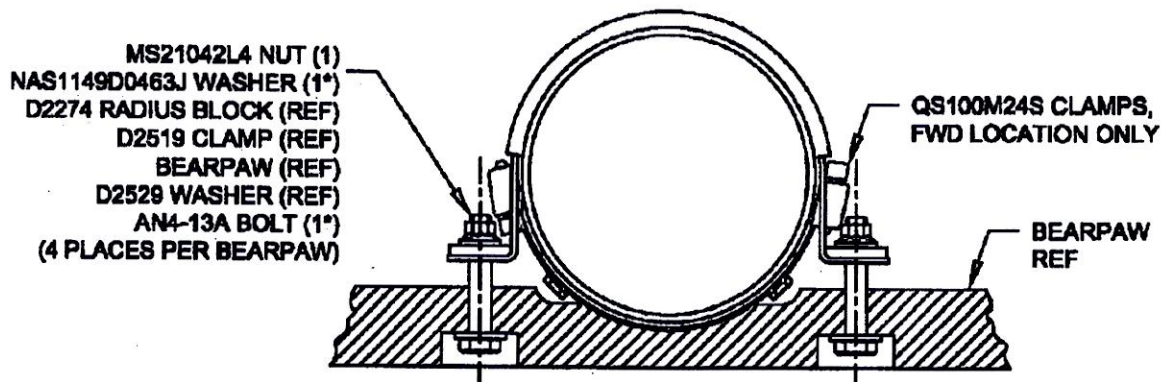
FIGURE 3: HARDWARE INSTALLATION AT MID HOLE LOCATION
(WITH WEARPLATE, NOT TO SCALE)

DESIGN	ML	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ML		
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MFG. APPR.	N/A	DSI 9750	SHEET 4 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
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* ADDITIONAL NAS1149D0463J WASHERS MAY BE INSTALLED UNDER THE NUTS TO ENSURE 1.5-4 THREADS IN SAFETY ON THE BOLTS. IT IS ALSO ACCEPTABLE TO REPLACE THE AN4-13A BOLTS WITH LONGER OR SHORTER AN4 BOLTS, IF REQUIRED.

**FIGURE 4: HARDWARE INSTALLATION AT FWD HOLE LOCATION
(WITH WEARPLATE, NOT TO SCALE)**



* ADDITIONAL NAS1149D0463J WASHERS MAY BE INSTALLED UNDER THE NUTS TO ENSURE 1.5-4 THREADS IN SAFETY ON THE BOLTS. IT IS ALSO ACCEPTABLE TO REPLACE THE AN4-13A BOLTS WITH LONGER OR SHORTER AN4 BOLTS, IF REQUIRED.

**FIGURE 5: HARDWARE INSTALLATION
(WITHOUT WEARPLATE, NOT TO SCALE)**

DESIGN	ML	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ML		
CHECKED	<i>up</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9750	SHEET 5 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	INSTALL MODIFICATION	NTS
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REFERENCE ONLY

3.0 PARTS LIST

The DSI 9750-011 Clamp Relocation Kit can be procured from Dart to install D135-692-041 on D135-692-011 at CHG 002 and earlier, and includes hardware for Qty 2x skid tubes.

Qty -011	Part Number	Description
X	DSI 9750-011	Clamp Relocation Kit
8	D2529	WASHER
4	AN4-11A	BOLT
4	MS21042L4	NUT

The parts list for IIN-D135-692 and ICA-D135-692 is amended as follows:

Qty -011	Qty -041	Part Number	Description
X		D135-692-011	BEARPAW INSTALLATION
	X	D135-692-041	WEARPLATE KIT
4		D2182B060	RUBBER CUSHION
8		D2274	RADIUS BLOCK
2		D3049-1	BEARPAW
8	8	D2529	WASHER
4		D2519	CLAMP
	2	D3719-041	WEARPLATE
	4	AN4-11A	BOLT
8	8	AN4-13A	BOLT
8	12	MS21042L4	NUT (OR MS21042-4)
8	8	NAS1149D0463J	WASHER
4		QS100M24S	CLAMP

4.0 WEIGHT AND BALANCE

There is a negligible weight and balance change associated with this modification.

DESIGN	ML	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ML		
CHECKED	<i>up</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9750	SHEET 2 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	INSTALL MODIFICATION	NTS
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REFERENCE ONLY

4. WEIGHT AND BALANCE

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D135-692-011 <i>Bearpaw Installation</i>	11.8 lb 5.36 kg	0.0 in 0.0 m	0.0 in-lb 0.0 m-kg	199.7 in 5.07 m	2356 in-lb 27.2 m-kg
D135-692-041 <i>Wearplate Kit</i>	2.24 lb 1.0 kg	0.0 in 0.0 m	0.0 in-lb 0.0 m-kg	199.7 in 5.07 m	447 in-lb 5.1 m-kg
D135-692-011 <i>Bearpaw Installation, Aft Location</i>	11.8 lb 5.36 kg	0.0 in 0.0 m	0.0 in-lb 0.0 m-kg	201 in 5.10 m	2372 in-lb 27.3 m-kg
D135-692-041 <i>Wearplate Kit, Aft Location</i>	2.24 lb 1.0 kg	0.0 in 0.0 m	0.0 in-lb 0.0 m-kg	201 in 5.10 m	450 in-lb 5.1 m-kg

5. PARTS LIST

Qty -011	Qty -041	Part Number	Description
X		D135-692-011	BEARPAW INSTALLATION
	X	D135-692-041	WEARPLATE KIT
4		D2182B060	RUBBER CUSHION
8		D2274	RADIUS BLOCK
2		D3049-1	BEARPAW
8		D2529	WASHER
4		D2519	CLAMP
	2	D3719-041	WEARPLATE
8	8	AN4-13A	BOLT
8	8	NAS1149D0463J	WASHERS
8	8	MS21042L4	NUT (OR MS21042-4)
4		QS100M24S	CLAMP

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Revision: **B**

Date: 15.07.20

Work Order ID 166443

Friday, September 22, 2017 8:51:33 AM

166443

Page 1

Item ID: D135-692-041

Revision ID:

Item Name: EC135 Bearpaw Wearplates

Start Date: 9/22/2017 Start Qty: 1.00

Required Date: 10/4/2017 Req'd Qty: 1.00

Reference: 132436 S/C

Accept

N900040100

Setup Start ***NS1***

Stop ***NS2***

Cust Item ID:

Customer:

today

1

1

Approvals:

Process Plan:

Date: 9/22/17

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start ***NR1***

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

DSI9400

Rev A

DSI9750

REV A

100

Document Control

DOCUMENT CONTROL

SEP 22 2017

0.00

100

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile and create labels per PPP D135-692-041 CHG002

110

Pick Kit

0.00

110

Packaging

Packaging

Memo

0.00

Packaging

United States of America
Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

Number SR01042SE

This certificate, issued to

Dart Aerospace USA, Inc.
190 S. Danebo Ave.
Eugene, OR 97402

certifies that the change in the type design for the following product with the limitations and conditions therefore as specified hereon meets the airworthiness requirements of Part 27 of the Federal Aviation Regulations.

Original Product—Type Certificate Number:

H88EU

Make:

Airbus Helicopters Deutschland GmbH

Model:

EC135P1, EC135T1, EC135P2, EC135T2, EC135P2+,
EC135T2+, EC135P3, EC135T3

Description of the Type Design Change: Fabrication of Dart D135-692-011 Bearpaws in accordance with Dart Aerospace USA, Inc. Master Document List No. MDL-D135-692, Revision H, dated June 8, 2017, or later Federal Aviation Administration (FAA) approved revision; and installation of this system in accordance with Installation Instructions Document No. IIN-D135-692, Revision B, dated July 20, 2015, or later FAA-approved revision. This modification must be maintained in accordance with Instructions for Continued Airworthiness, Document No. ICA-D135-692, Revision 1, dated July 20, 2015, or later FAA-accepted revision.

Limitations and Conditions: Approval of this change in type design applies to the above model rotorcraft only, which are equipped with the standard skidtubes, high gear skidtubes, or float skidtubes as defined in the Installation Instructions. This approval should not be extended to other rotorcraft of this model series unless the installer determines that the relationship between this change and any other previously incorporated approved modifications will introduce no adverse effect upon the airworthiness of that rotorcraft. A copy of this certificate, the Installation Instructions, and the Instructions for Continued Airworthiness must be maintained as part of the permanent record of the modified rotorcraft.

If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: October 23, 2001

Date reissued: October 28, 2015

Date of issuance: January 25, 2002

Date amended: June 27, 2017



By direction of the Administrator

Nancy Marsh
(Signature)

for Manager, Seattle Aircraft Certification Office
(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.